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When lives are put on hold: Lengthy asylum processes decrease employment among refugees

Jens Hainmueller,[1,2]* Dominik Hangartner,[2,3]*† Duncan Lawrence[2]*

European governments are struggling with the biggest refugee crisis since World War II, but there exists little evidence regarding how the management of the asylum process affects the subsequent integration of refugees in the host country. We provide new causal evidence about how one central policy parameter, the length of time that refugees wait in limbo for a decision on their asylum claim, affects their subsequent economic integration. Exploiting exogenous variation in wait times and registry panel data covering refugees who applied in Switzerland between 1994 and 2004, we find that one additional year of waiting reduces the subsequent employment rate by 4 to 5 percentage points, a 16 to 23% drop compared to the average rate. This deleterious effect is remarkably stable across different subgroups of refugees stratified by gender, origin, age at arrival, and assigned language region, a pattern consistent with the idea that waiting in limbo dampens refugee employment through psychological discouragement, rather than a skill atrophy mechanism. Overall, our results suggest that marginally reducing the asylum waiting period can help reduce public expenditures and unlock the economic potential of refugees by increasing employment among this vulnerable population.

INTRODUCTION

There is a distressing refugee crisis taking place throughout the world. As people flee civil war, state failure, disease, natural disasters, and poverty, refugee-receiving countries are faced with an urgent and fundamental challenge: how best to integrate the massive number of asylum seekers who have been granted some form of refugee status, totaling 14.3 million in 2014 (*1*). In 2014 alone, Europe received more than 700,000 new asylum claims, a 47% increase compared to 2013 (*2*), and the crisis shows no signs of abating. In 2015, more than 1 million new asylum applications were lodged in Europe, and more than 3700 asylum seekers were reported dead or missing on the journey (*3*, *4*).

Asylum seekers are trapped along a path of despair: fleeing horrific circumstances at home, undertaking a perilous and often deadly journey, and then ultimately being met with resistance and exclusion in the resettlement process. The massive influx of asylum seekers has resulted in political conflict in many receiving countries and increasingly violent native backlash against migrants including mass demonstrations, hate crimes, and even arson attacks on asylum housing facilities (*5*, *6*). Successfully integrating refugees can help curb this rising native backlash seen throughout Europe, while also unleashing the full economic potential of the diverse skills among accepted refugees, most of whom remain in the host country for good (*7*). To be clear, refugee integration has been a long-standing and pressing issue in many European countries with large refugee populations, such as Switzerland (*8*, *9*), and the current crisis exacerbates this major ongoing problem.

In the context of this crisis, receiving countries have a unique opportunity to alter the management of how asylum seekers are received and perhaps, most importantly, the policies that determine how long they have to wait to begin their new lives in the host country (*10*). The rules of the Dublin Regulation, which apply to European Union member states and cosignatories such as Switzerland, demand that asylum seekers be temporarily housed somewhere in the responsible country of arrival while they wait for a decision on their asylum claim. During this waiting period, the asylum seekers find themselves in a legal and social limbo in which their lives are essentially put on hold, and they operate under the threat of deportation in the case that their asylum claim is denied. Asylum seekers typically live isolated from the native population in an assigned reception center or in collective accommodation. They typically receive welfare support and face some restrictions on travel and employment, and there is an expectation that many of them will be deported (*10*–*13*). For many, this idle waiting period lasts for years until either their claim is denied and they are sent back or their claim is approved and they are granted some form of refugee status that protects them from deportation and provides temporary legal residency in the host country. The receipt of this new status marks a crucial transition point for asylum seekers, because they are now officially regarded as protected refugees, and state authorities expect that they will rapidly integrate into the host country and make their own living.

How does the length of the period during which asylum seekers are forced to wait for their asylum decision affect the subsequent integration and success of refugees in what will become their adoptive homes? Does being forced to wait longer dampen the chances that refugees will find employment and successfully navigate the difficult transition from a life in limbo to becoming productive participants in the host country economy? There are theoretical reasons to expect that longer waiting periods can act as an important impediment to subsequent integration. Psychological stress can arise when individuals face a threat to their resources or investment (*14*), de facto unemployment during waiting periods can lead to depression and disempowerment (*15*–*17*), and continuous uncertainty can compound the trauma already experienced by many refugees (*18*, *19*). In addition,

[1]Department of Political Science, Stanford University, Stanford, CA 94305, USA. [2]Immigration Policy Lab, Stanford University, Stanford, CA 94305–6044, USA, and University of Zurich, 8050 Zürich, Switzerland. [3]Departments of Government and Methodology, London School of Economics and Political Science, London WC2A 2AE, UK.
*These authors contributed equally to this work.
†Corresponding author. Email: d.hangartner@lse.ac.uk

economic theory suggests that time out of the labor market will cause skills to atrophy, and therefore, long-term unemployed asylum seekers will face steep barriers to reentering the labor market (*20*).

There is a significant body of literature emphasizing the importance of the postmigration experience as it relates to refugee integration. First, several important studies have documented the economic, social, health, and psychological issues among refugees in European and other host countries (*21*–*27*). In Switzerland specifically, asylum seekers have been shown to have high levels of psychiatric disorders (*28*). Second, and more specific to this particular research question, there is also a large body of in-depth qualitative work illuminating the multitude of issues and challenges that arise from the uncertainty faced by asylum seekers and refugees while living in limbo (*29*–*34*). Recounting her family's experience waiting, an asylum seeker in Switzerland captures some of the specific challenges of an uncertain future that these studies highlight: "We came here and my husband had high hopes; he thought he could find work here… five years living in real uncertainty, we didn't know what was going to happen with us…. I can see the same with many other men, that they become a mess, and then their marriage and family and everything [falls apart]" (*19*). Another asylum seeker, a young Afghan in Sweden, pointedly captures the waiting process: "Even in prison they operate with a time limit! 'This is when you are going to be free,' they'll tell you. But here they only tell you to wait, just wait…" (*34*).

Despite the immediate policy relevance of the issue and substantial qualitative evidence as to the hardships asylum seekers face during lengthy asylum procedures, it remains unknown how longer wait times causally affect the integration of refugees into receiving countries. The aforementioned studies are mostly descriptive and typically based on small-*N* qualitative interviews and occasional quantitative cross-sectional studies that are not designed to isolate the causal effects of specific asylum policies on refugee integration. This lack of causal evidence reflects the inherent difficulties in gathering large-scale high-quality panel data on the diverse and vulnerable refugee population that needs to be paired with details about the asylum process and integration outcomes to lend itself to a causal identification strategy.

Our contribution fills this gap by providing new causal evidence that isolates and quantifies the effect of the length of the wait time for the asylum decision on the subsequent employment of refugees who have been granted subsidiary protection in the major receiving country Switzerland. Switzerland is one of the top destination countries in Europe both in terms of stock of refugees and in terms of the number of new asylum seekers, and the composition of its refugee and asylum-seeking population is similar to that of other important receiving countries in Europe (see figs. S1 to S3).

Our quantity of interest is the effect of the length of the waiting period on the probability that refugees are employed in the year after they receive refugee status with subsidiary protection. The waiting period is measured as the number of days it took from the submission of the asylum application to a positive decision granting subsidiary protection. During their waiting period, asylum seekers are housed in accommodations in a randomly assigned Swiss canton and they are not allowed to leave this canton. They are allowed to work while waiting but face restrictions in some cantons in the sense that they can only take jobs after a mandatory waiting period of 3 to 6 months, and employers have to demonstrate that no Swiss native or permanent resident can be found for a given job, and in addition, some cantons restrict employment to only specific permissible industries. These restrictions for labor market access of asylum seekers are common in other European countries (see table S1).

RESULTS

Effect of waiting period on refugee employment

We draw upon unique register panel data that track all individuals who applied for asylum in Switzerland between 1994 and 2004 and were subsequently granted the status of subsidiary protection within 5 years of arrival (n = 17,360). The data are not self-reported but based on the processing records of the State Secretariat for Migration (SEM) that centrally decides all the asylum claims. On average, refugees in our sample waited 665 days for their asylum decision with an SD of 478 days (see table S2 for summary statistics).

To identify the causal effect of waiting, we exploit the large quasi-random variation in wait times that results from the batch processing of the asylum claims by the Swiss SEM. A detailed description of the causal identification strategy is provided in Materials and Methods.

Table 1 shows the main regression result that longer waiting periods considerably lower subsequent employment. Model 1 suggests that, controlling for week of entry, origin, religion, quarters of residency, ethnicity, assigned canton, age, and gender, being forced to wait one additional year for the asylum decision lowers the probability of being employed by about 4.9 percentage points (two-tailed, $P < 0.00004$). This is a large effect that corresponds to about a 23% drop compared to the average employment rate, which is about 21% (see the last row of Table 1). Model 2 shows that the effect is somewhat smaller, but still substantively significant, at about 3.4 percentage points (two-tailed, $P < 0.018$) or 16% compared to the average employment rate, when we add the origin × week of entry fixed effects and only use variation in the day of arrival within the same origin and week.

How robust are these findings? One concern might be that there remains an unobserved characteristic that strongly correlates with wait times and subsequent employment. Maybe even among refugees who arrive in the same week and are similar on all covariates, those with higher ability somehow get faster decisions and are more likely to find work. If refugees who are similar to our controls still differ on an unobserved confounder such as ability, then we would expect that those with higher ability are more likely to find employment while waiting. In other words, the lagged employment before the decision provides an ideal proxy variable that captures unobserved factors that are associated with a refugee's latent employment potential. If omitted variable bias is a concern, we should therefore see that the coefficient on the waiting period goes to zero once we control for previous employment while waiting. Models 3 to 11 in Table 1 show that this is clearly not the case. Just as we would expect given that wait times are assigned by the SEM independently of latent employment potential and that refugees cannot sort around batch processing dates to influence their wait times within the same week of arrival, the effect estimates of the waiting period are almost identical, for example, 4.6 percentage points versus 4.8 percentage points when excluding or including 1 year of lagged employment (model 3 versus model 4). This is despite the fact that previous employment is an extremely powerful predictor of postdecision employment; for example, being employed in the year before the decision is associated with a 48–percentage point increase in subsequent employment (model 4). The patterns are also similar with effect sizes between 15 and 31% when we add the origin × week of entry fixed effects and control for 1, 2,

Table 1. Longer asylum wait times lower the probability of subsequent employment for refugees. Regression coefficients with robust SEs in parentheses. Outcome is measured as 100 for employed and 0 for not employed so that effects are in percentage points. All regressions include fixed effects for gender, age, quarter of residency, religion, ethnicity, and canton. Models 1, 3, 4, 6, 7, 9, and 10 also include fixed effects for origin and week of entry. Models 2, 5, 8, and 11 also include fixed effects for each origin × week of entry combination. Models 1 and 2 refer to all refugees. Models 3 to 5, 6 to 8, and 9 to 11 are restricted to refugees for which 1, 2, or 3 years are observed before the asylum decision, respectively.

Model	1	2	3	4	5	6	7	8	9	10	11
Outcome	Employed (t)										
Sample mean	21.17		24.38			28.35			31.71		
Wait time (years)	−4.87 (1.18)	−3.43 (1.46)	−4.64 (1.27)	−4.79 (1.13)	−3.63 (1.47)	−5.86 (1.73)	−6.14 (1.51)	−5.04 (1.96)	−9.48 (2.48)	−9.84 (2.15)	−7.12 (3.16)
Employed (t − 1)				48.27 (1.33)	48.72 (1.54)		45.86 (1.54)	47.39 (1.87)		44.57 (1.95)	45.30 (2.54)
Employed (t − 2)							11.49 (1.80)	6.81 (2.15)		12.60 (2.23)	8.61 (2.75)
Employed (t − 3)										2.80 (2.53)	2.24 (3.33)
n	17,360		13,877			9108			5437		
Employed Δ (%)	−23.01 (5.55)	−16.21 (6.89)	−19.04 (5.19)	−19.67 (4.63)	−14.90 (6.04)	−20.65 (6.10)	−21.65 (5.32)	−17.78 (6.91)	−29.90 (7.83)	−31.04 (6.79)	−22.46 (9.95)
Additional fixed effects											
Origin (# 96)	x		x	x		x	x		x	x	
Week of entry (# 572)	x		x	x		x	x		x	x	
Origin × week of entry (# 5054)		x			x			x			x

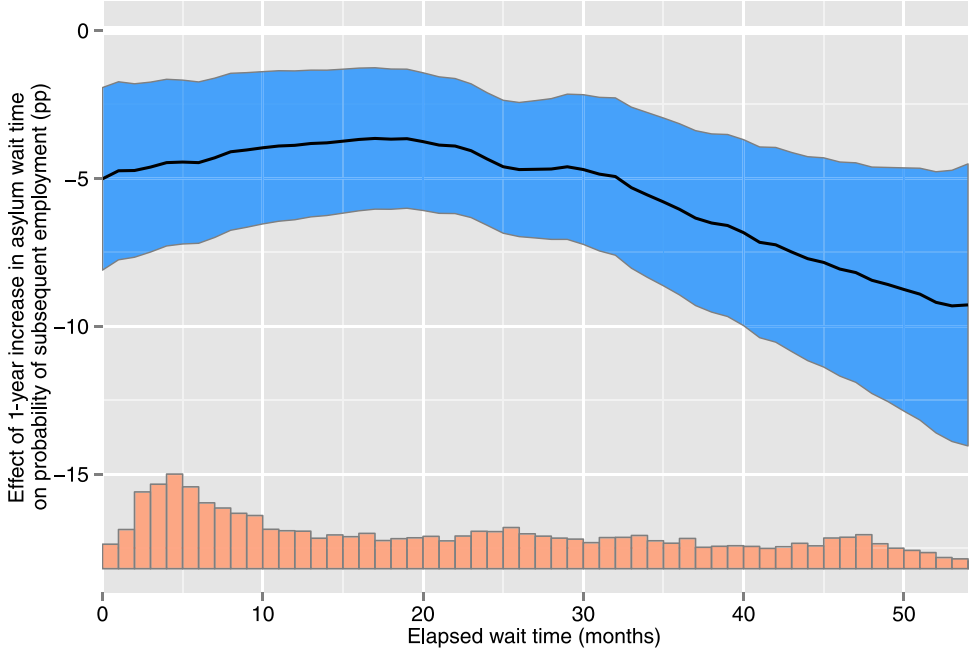

Fig. 1. Longer asylum wait times decrease the probability of subsequent employment for refugees, and this negative effect is stable across elapsed wait times. Point estimates (black solid line) and 95% confidence intervals (blue ribbon) for the effect of a 1-year increase in the asylum wait time on the probability of subsequent employment depending on how many months a refugee has already waited for his or her asylum decision (n = 17,360) are shown. Effect estimates based on locally weighted kernel regressions with Epanechnikov kernel (bandwidth, 2). Regressions control for gender, age, and fixed effects for week of entry, origin, quarter of residency, religion, ethnicity, and canton. pp, percentage point.

or 3 years of previous employment leading up to the decision (models 3 to 5, 5 to 8, and 9 to 11, respectively).

As an additional robustness check, we test whether the effect of the wait times varies for refugees who have had a shorter or longer wait. Figure 1 shows the effect of waiting one more year depending on the elapsed wait time (based on a locally weighted kernel regression with the same controls as the baseline model). We find that the negative effect of longer wait times is remarkably stable for refugees who have had a shorter or longer wait, with effect sizes ranging between 4 and 8 percentage points across the range of elapsed wait times. If anything, the effect becomes more negative as refugees wait longer.

In the Supplementary Materials, we conduct further checks that show that the results are robust regardless of whether we use a variety of other fixed effects (see table S3) or exclude the canton fixed effects (see table S4) and regardless of whether refugees appeal their asylum decision (see table S5). We also find that the effects of waiting are similar in cantons with more and less restrictive rules for labor market access for asylum seekers (see table S6). Finally, we also estimate a panel model with refugee and year fixed effects to estimate how the effect of getting subsidiary protection status on employment varies with the length of the waiting period. The results for this related quantity of interest are very similar in that the positive effect of getting subsidiary protection status on employment is reduced by about 3 percentage points for each additional year of waiting (see table S7). Overall, these checks show that the results are stable across elapsed wait times, appeals, and more and less restrictive cantons, as well as when controlling for up to 3 years of lagged employment, and are also consistent when using an alternative panel identification strategy, underscoring the robustness of the key findings.

Mechanisms

What mechanisms might account for the negative effect of waiting in limbo? Two possibilities are that the effect is driven by a skill atrophy mechanism (*20*) and psychological discouragement mechanisms (*14*–*17*). To shed some light on which mechanism might be more important, we now replicate the model for different subgroups of refugees stratified by gender, origin, age at arrival, and assigned language region. If the effect of wait times is driven mainly by skill atrophy, that is, the depreciation of occupational skills acquired through education, training, or job experience, then we expect to see varying effects for these refugee subgroups because they vary considerably in their occupational skills and should therefore be differently affected by the depreciation of these occupational skills as a result of waiting. If instead the effect of waiting is mostly driven by psychological mechanisms such as stress, depression, apathy, or low motivation that arises from the prolonged uncertainty and idle waiting in isolation, we expect a more similar effect given that these subgroups are exposed to the same asylum conditions and that the core feelings associated with stress and depression are typically thought to be universally experienced (*35*). Figure 2 demonstrates that the deleterious effect of waiting is remarkably stable across groups with only some variation (see table S8 for the regression table). The only exception is that the effect is insignificant for the subsamples of refugees from Asian origin countries.

Figure S4 and table S9 show that the effect of waiting is also similar when we replicate the models for subgroups stratified by the length of time the country of origin has been in conflict and levels of infant mortality. Overall, this pattern is consistent with the idea that the effect of wait time is mostly driven by psychological mechanisms, rather than skill atrophy, but future work is needed to more precisely unpack these mechanisms based on large-scale assessments of the refugees' psychological well-being and their skill depreciation over time.

DISCUSSION

Together, our results show that waiting longer in limbo for the asylum decision strongly reduces the employment integration of refugees and that this effect is fairly similar across subgroups. This new causal evidence, which complements and advances existing qualitative research, has important policy implications and suggests a practical mechanism to improve economic integration of one of the world's most vulnerable and growing populations. Our analysis also suggests that simply providing asylum seekers access to the labor market while waiting for a decision is not sufficient to facilitate economic integration of refugees. Although we caution against extrapolating the results to extremely large reforms of the asylum process because of potential general equilibrium effects, our findings clearly suggest that policy reforms that marginally reduce the waiting period for asylum seekers would help refugees to navigate the difficult transition from a life in asylum limbo to a successful integration into the host country. Moreover, these marginal reforms would increase employment and thereby reduce the significant public expenditures for welfare benefits and increase the tax contributions of newly employed refugees [see the Supplementary Materials for a marginal cost-benefit analysis that suggests that marginally reducing wait times by only 10% (66 days) would lead to savings of about $5.6 million in a single year alone]. Finally, better economic integration of refugees will also likely help dampen the increasing native backlash against refugees (*7*).

Although our study provides an important first step in enhancing our understanding of how the asylum process causally affects refugee integration, future research and more data are clearly needed to help guide policy-makers who are struggling with the current and future refugee crises. For example, we do not know what the long-term effects of wait times are or how other policy parameters, such as centralized versus decentralized housing, labor restrictions while waiting, or support programs, affect refugee integration.

MATERIALS AND METHODS

Data

The data were provided by the Swiss Federal Statistical Office and included the refugees' age, gender, country of origin, ethnicity, religion, date of entry, date of the asylum decision, and information about whether they were employed at the end of each year. Our use of these data was governed by a data use agreement with the Swiss Federal Statistical Office and did not require informed consent and institutional review board approval, given the nature of the data. These data enabled us to remove biases from unrepresentative samples, survey self-reporting, and confounding that cannot be addressed with cross-sectional data. The Supplementary Materials provide descriptive statistics and details on the data and the Swiss asylum process, which is broadly similar to that of European Union member states.

Empirical strategy

Figure 1 shows the average wait times by month of entry for refugees from the top six origin countries. Even within the same origin group,

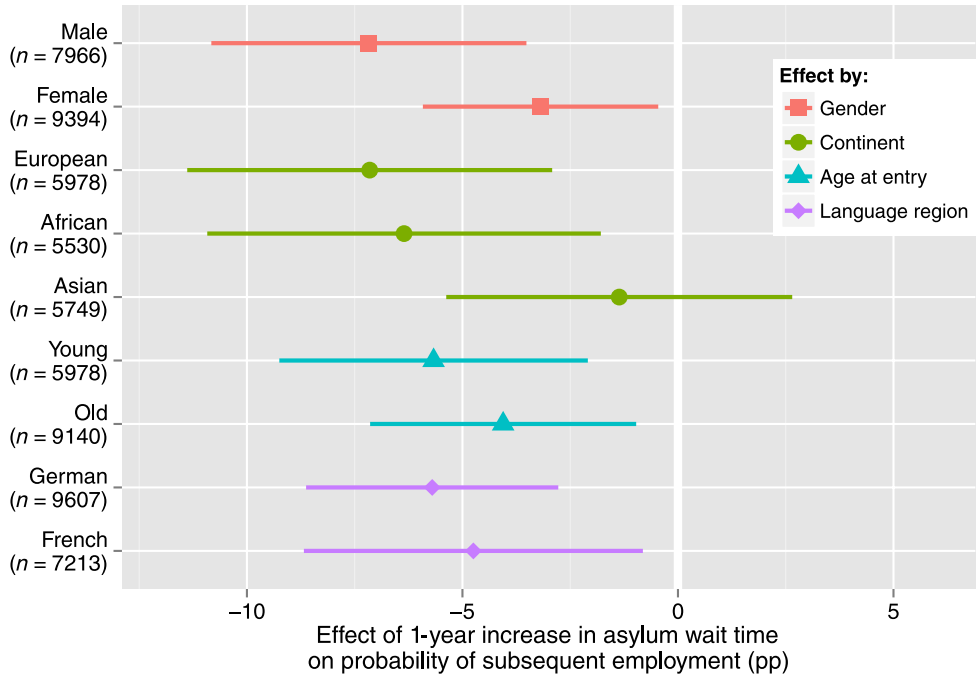

Fig. 2. Longer asylum wait times decrease the probability of subsequent employment for various subgroups of refugees stratified by gender, origin continent, age at arrival, and assigned language region. Point estimates and 95% confidence intervals for the effect of a 1-year increase in the asylum wait time are shown. Estimates are based on ordinary least squares regression with robust SEs. Regressions include fixed effects for gender, age, week of entry, origin, religion, ethnicity, canton, and quarter of residency.

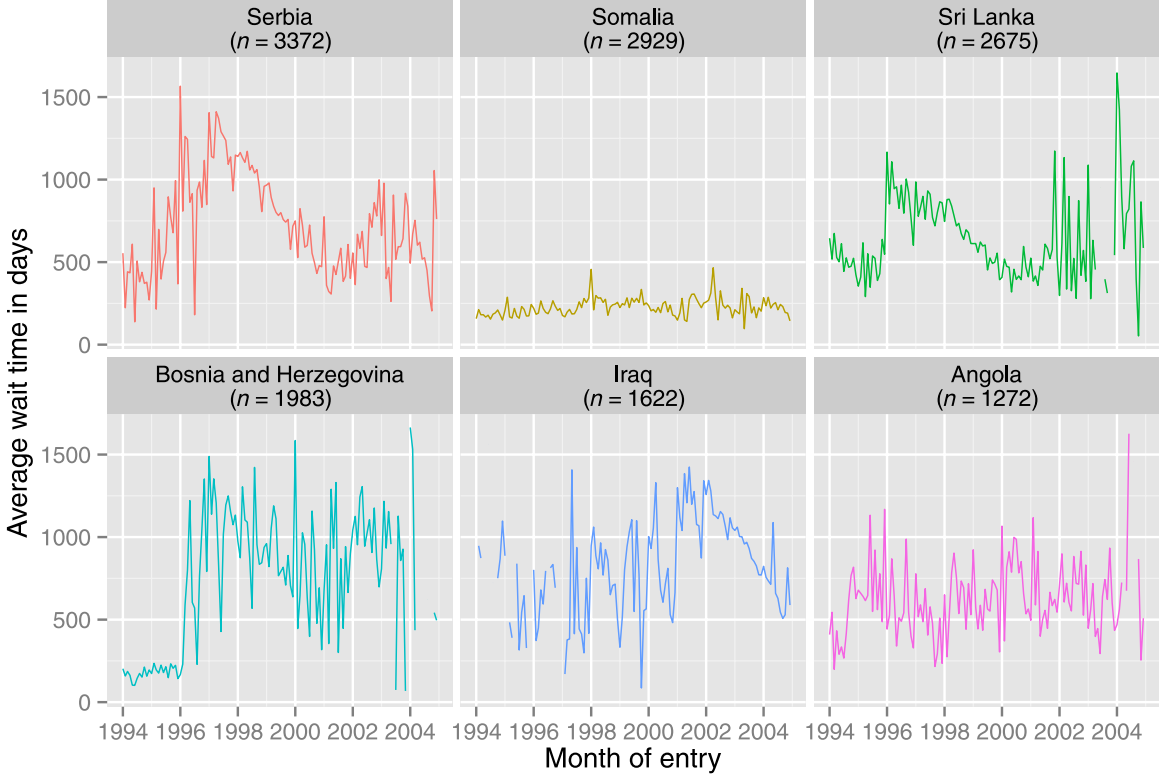

Fig. 3. Wait times for asylum decision vary by origin country and month of arrival. The average wait times for the asylum decision in days by month of arrival for refugees from the top six sending countries.

wait times varied by 179 days on average, from one month to the next. Conditional on origin and time of arrival, the variation in wait times was exogenous to the employment prospects of individual applicants. This was because the SEM dictated the schedules for all hearings and decisions; individual applicants could not simply speed up their decisions. This feature primarily rules out self-selection from the side of the applicants, which would be a concern if refugees who are more motivated to integrate could speed up their wait times and were also more likely to subsequently find employment.

Moreover, the SEM bases its decision solely on the legal criteria of whether applicants require subsidiary protection and cannot be deported back to their home country. This requires verifying the applicants' origin and the current conditions in their home country. To deal with this task, the SEM caseworkers often processed applicants from the same origin in batches once a certain number of similar cases have accumulated. This stochastic batch processing is clearly visible in the frequent spikes in the wait times in Fig. 3. Batch processing means that otherwise similar applicants who happen to arrive on days right before or right after a batch has been processed faced quite different waiting periods simply because they got lucky or unlucky.

In table S10, we provide a test of these features and regress an applicant's own wait time on the average wait time of all the other applicants who arrived from the same origin on the same day. We found that almost all of the variation in an applicant's individual wait time was driven by the average wait time of the other applicants who arrived on the same day. This is what we would expect given that applications are processed in batches based on origin and arrival dates and given that applicants cannot speed up their individual decisions.

Note that a variety of factors contribute to the quasi-random variation in wait times among refugees who arrive in Switzerland at a roughly similar time. First, batch processing by the SEM does not follow a fixed schedule that dictates that the batches are processed on a specific preannounced day or when a certain fixed threshold of cases is reached. Instead, batch processing occurs haphazardly at irregular intervals, depending on factors such as the workload of the caseworkers, how many cases have accumulated for specific origins, how conditions in the origin country are changing, and other idiosyncratic factors. As a result, refugees cannot a priori know the precise date at which a batch will be processed and use this knowledge to time their day of arrival to fall just before the date.

Second, fleeing to Switzerland typically involves a long and arduous journey that is fraught with perils and unpredictability. For example, refugees typically cannot precisely control when they will be driven out of their homes; when smugglers will transport them across a border; when their boats will be rescued or intercepted; when buses, trains, or trucks will be available; when they will be stopped by police or border agents; or when they will run out of money, water, food, or energy. Thus, for the most part, whether refugees arrive in Switzerland a few days earlier or later is simply beyond their precise control.

Third, because the SEM bases its decision solely on the legal criteria of whether an applicant requires subsidiary protection, the employability of asylum seekers or their potential employment while waiting does not factor in to the asylum decision. In table S11, we conduct a placebo check and regress the wait time on employment for up to 3 years before the asylum decision. We found that all the coefficients on previous employment were precisely estimated zeros, which demonstrated that the employment record of refugees had no bearing on how long they had to wait for a decision.

Econometric model

To estimate the impact of waiting in limbo, we used a baseline model in which we regressed the indicator for postdecision employment on the waiting period (measured in days divided by 365) and a large set of control variables that included fixed effects for origin, the week of entry, gender, age, quarters of residency, religion, ethnicity, and assigned canton such that the coefficient on the wait time was identified only on the basis of within-group variation (overall, the baseline model included 831 fixed effects). The quarter-of-residency fixed effects were included to control for a potential residency effect. They ensured that we identified the effect of wait times only based on variation in wait times that occurred between refugees who had been residing in Switzerland for the same total number of quarters. For example, we compared two refugees who had been in Switzerland for 2 years, but one of them waited 12 months for their asylum decision, whereas the other one waited 18 months.

To further exploit the batch processing of applications, we also fitted a second model where we replaced the origin and week of entry fixed effects with a full set of fixed effects for each of the 5054 observed combinations of origin and week of entry (the within-group SD was about 272 days on average). This specification considerably reduced the degrees of freedom and was very conservative in that it further restricted the identification to be only based on variation in wait times that stemmed from differences in the day of entry among refugees from the same origin who arrived in Switzerland in the same week. For example, we compared a Somali refugee who arrived on Monday or Tuesday in the first week of June 1999 with another Somali refugee who was similar on all the covariates and arrived in the same week but on Thursday or Friday.

Refugees who were similar on all the covariates and who arrived in the same week were likely to be similar on unobserved characteristics, and because the exact timing of batch processing was unknown to them and they did not precisely control their day of arrival, we expected that the refugees could not systematically sort around arrival days within a given week to affect how long they would have to wait. For these reasons, it is highly unlikely that the remaining variation in wait times is confounded by latent employment prospects or other unobserved characteristics that are correlated with subsequent employment. In other words, it is highly unlikely that some systematic process exists, which ensures that among observably similar refugees who arrive in the same week, those with high employment prospects typically arrive right before a batch will be processed, whereas those with low employment prospects typically arrive right after the batch was processed.

SUPPLEMENTARY MATERIALS

Supplementary material for this article is available at http://advances.sciencemag.org/cgi/content/full/2/8/e1600432/DC1

Supplementary Materials and Methods

Supplementary Results

fig. S1. Refugees and asylum seekers in European countries.

fig. S2. Composition of refugee population in European countries.

fig. S3. Composition of asylum seeker population in European countries.

fig. S4. Longer asylum wait times decrease the probability of subsequent employment for various subgroups of refugees stratified by war duration and the level of infant mortality from their origin country.

table S1. Asylum seeker labor market access.

table S2. Summary statistics.

table S3. Longer asylum wait times lower subsequent employment for refugees (controlling for up to 3 years of previous employment and additional fixed effects).

table S4. Results are robust to excluding the assigned canton as a control variable.
table S5. Effects of longer asylum wait times on subsequent employment are similar for appellants and nonappellants (controlling for up to 3 years of previous employment).
table S6. Effects of longer asylum wait times on subsequent employment are similar in cantons with 3 or 6 months of mandatory restrictions on labor market access (controlling for up to 3 years of previous employment).
table S7. Longer asylum wait times lower the positive effect of getting subsidiary protection status on employment (controlling in panel regression for person, year, and canton fixed effects).
table S8. Longer asylum wait times lower subsequent employment for various subgroups of refugees stratified by gender, origin continent, age at arrival, and assigned language region.
table S9. Longer asylum wait times lower subsequent employment for various subgroups of refugees stratified by war duration of the origin country and the origin infant mortality.
table S10. Because of batch processing, an applicant's own wait time is primarily driven by the average wait time for other refugees who arrive on the same day from the same origin.
table S11. Employment while waiting does not determine the wait time for the asylum decision.
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